

7075 1.5x1.5

Work Order ID 159548

Wednesday, April 12, 2017 3:50:56 PM

159548

Page 1

Item ID: 647.7815

Revision ID:

Item Name: Fwd Bracket

Start Date: 4/16/2017 Start Qty: 6.00

Required Date: 5/5/2017 Req'd Qty: 6.00

Reference: SCHEDULED/S

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Need!
647.7815
B159548
REV *A*
6

Approvals:

Process Plan:

DAS
21

Date: APR 13 2017

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
647.7800	A

100	BAND SAW	0.00
100		
Bandsaw	Memo	0.01
Jeaspa Bandsaw	Cut Blanks at 4.625"	

6 0

DAS
49
9-89

17/05/23

110	HAAS CNC VERTICAL MACHINING #1	0.34
110		
HAAS 1	Memo	2.09
HAAS CNC vertical machine #1	1-Machine per folio FB242	
	DWG REV: <u>7</u>	
	FOLIO REV: <u>24</u>	
	2- deburr and break all sharp edges	

6 0

DAS
44
9-89

17/05/23
17/05/24

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			OTHER : ☐	

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159548

Page 2

Item ID: 647.7815

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Fwd Bracket

Start Date: 4/16/2017 Start Qty: 6.00

6

Cust Item ID:

Required Date: 5/5/2017 Req'd Qty: 6.00

6

Customer:

Reference: SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00				6	0		DAS 49 9-89 17/05/23
120									
QC	Memo	0.06							
Quality Control									
130	QC8- Inspect parts - second check	0.00				6	0		DAS 14 9-89 17/05/24
130									
QC	Memo	0.12							
Quality Control									
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00				6			DAS 13 9-89 JUN 06 2017
140									
Outsource4	Memo	1,080.00							
Outsource process - Anodize	Issue P/O to ATG : 36583								

1- Black Anodize as per Dwg 647.7800

2- PRIME AS PER DWG, SEE NOTE #2

Certification of Conformity is required

DQA: _____ Date: _____



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			Completed By		
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
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Page 3

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 Start Date: 4/16/2017 Start Qty: 6.00 ***6*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.12							
Packaging									
160	QC5- Inspect part completeness to step on W/O	0.00							
160									
QC	Memo	0.12							
Quality Control	3.2 mils thickness Primer								
180	Identify as per dwg & Stock Location: <u>CC644</u>	0.00							
180									
Packaging	Memo	0.06							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								

60x 5077-6-16

6 JUN 19 2017 DAS 38 9-89

6 JUN 20 2017 DAS 6 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.60							
Quality Control									

DAS
21
9-89

JUN 2 0 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Picklist Print

Wednesday, April 12, 2017 3:50:55 PM

Page 1

Work Order ID: 159548

159548

Parent Item: 647.7815

647 7815

Parent Item Name: Fwd Bracket

Start Date: 4/16/2017

Required Date: 5/5/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV A RQ 13/12/23 VERIFIED BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B1.500X1.500		Purchased	No			100	f	13.4350	0.385	2.431579			DAS 49 9-89

~~*M7075T6B1.500X1.500*~~

7075 T6 BAR 1.500 x 1.500

M7075T6S 1.500

Location

Loc Qty

Loc Code

MAT006

13.43501

M135248

0.00001

M136289

1.395

M136945

12.04

M137542

2.341

17/05/23

9/17/15/4 PER DWG.

Please see attach Pablo's E-mail
for material approval.

170505

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :					
Misidentified ☐	Past Due ☐						

DART AEROSPACE LTD	Work Order:	159548
Description: Fwd Bracket	Part Number:	647.7815
Inspection Dwg: 647.7800 Rev: N02 A <i>AFB</i> 2/11/13		Page 1 of 1

[illegible]

Rev	Date	Change	Revised by	Approved
A	14.06.26	New Issue	KJ	
B	15.11.05	R0.125 dimension added	KJ	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PRODUCTION RELEASE	12-21-07	P. BRAYO
2	INITIAL RELEASE	03-09-10	P. BRAYO
3	INCORPORATED ECH 03120 04407, & 03320		

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH IAW MPP-172 SECTION 3.3 & 4.3.
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120

SHEET / PLATE

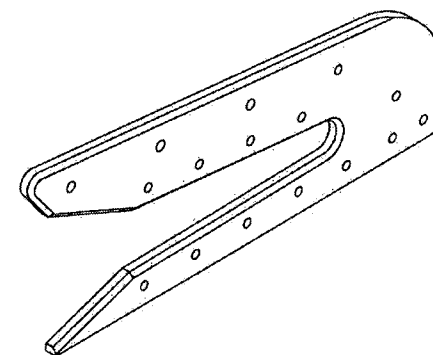
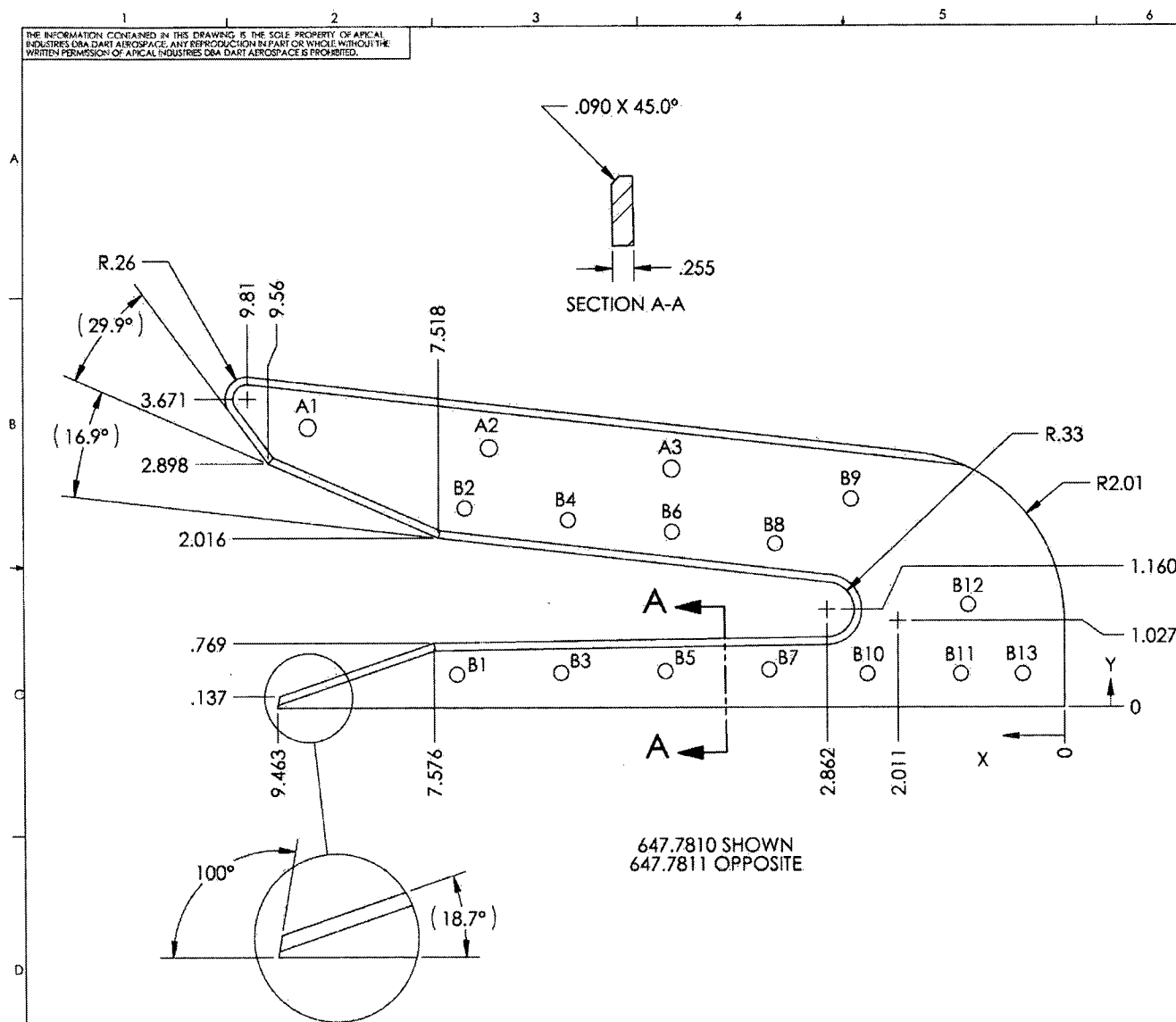
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 159548 MLW

1704-13

	647.7823	CROSS BRACKET AFT	△	△	
	647.7822	EYE BOLT FITTING RH	△	△	
	647.7821	EYE BOLT FITTING LH	△	△	
	647.7820	CROSS BRACKET AFT	△	△	
	647.7819	CROSS BRACKET FWD	△	△	
	647.7818	MOUNTING CHANNEL	△	△	
	647.7817	AFT BRACKET	△	△	
	647.7816	AFT BRACKET	△	△	
	647.7815	FORWARD BRACKET	△	△	
	647.7814	FORWARD BRACKET	△	△	
	647.7813	CENTER PLATE LOWER	△	△	
	647.7812	CENTER PLATE UPPER	△	△	
	647.7811	BRACKET B	△	△	
	647.7810	BRACKET A	△	△	
	F/N	PART #	DESCRIPTION	MAT'L	SPEC
QTY		PARTS LIST			
NEXT ASSY (S)		ORIGINAL DATE: 11-25-09 DRAWN BY: CHESTER F. ANDERSON P. BRAYO DRAWING APPROVAL P. BRAYO 12-21-07 CONTRACT NO. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES: 1:2 BRACKET SIZE: B CAGE CODE: 07M26 DWG. NO: 647.7800 SCALE: NONE SHEET: 1 OF 1			
647.7300					
		3030 ENTERPRISE CT SUITE 100 VISTA, CA 92081 (760)-724-5300			
		APICAL INDUSTRIES, INC. 10100 S.W. 48TH AVE. SUITE 100			

DART 3030 ENTERPRISE CT., SUITE A
VISTA, CA 92081
(760) 724-5300
APICAL INDUSTRIES, INC.
DBA DART AEROSPACE

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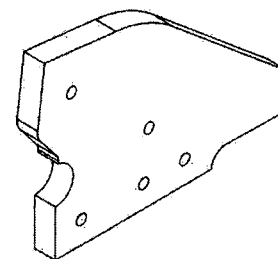
647.7810
647.7811 OPPOSITE

TAG	X LOC	Y LOC	SIZE
A1	9.092±.002	3.332±.002	Ø.201 THRU
A2	6.906±.002	3.083±.002	Ø.201 THRU
A3	4.720	2.835±.002	Ø.201 THRU
B1	7.300±.002	.397±.002	Ø.177 THRU
B2	7.203±.002	2.369±.002	Ø.177 THRU
B3	6.050±.002	.415±.002	Ø.177 THRU
B4	5.961±.002	2.228±.002	Ø.177 THRU
B5	4.800±.002	.433±.002	Ø.177 THRU
B6	4.719±.002	2.088±.002	Ø.177 THRU
B7	3.550	.450	Ø.177 THRU
B8	3.476	1.947	Ø.177 THRU
B9	2.575	2.475	Ø.177 THRU
B10	2.380	.400	Ø.177 THRU
B11	1.250	.400	Ø.177 THRU
B12	1.160	1.220	Ø.177 THRU
B13	.500	.400	Ø.177 THRU

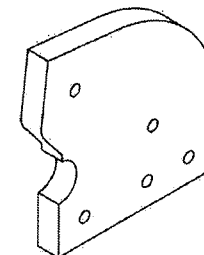
ORIGINAL DATE 11.05.09		DART AEROSPACE APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWN BY L. ANDERSON P. BRAVO		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWING APPROVAL 10.21.09		BRACKET	
CONTRACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 ANGLES ±.5°		SERIAL CODE B 07M26	REV. A
		647.7800	
		SHEET 2 OF 10	

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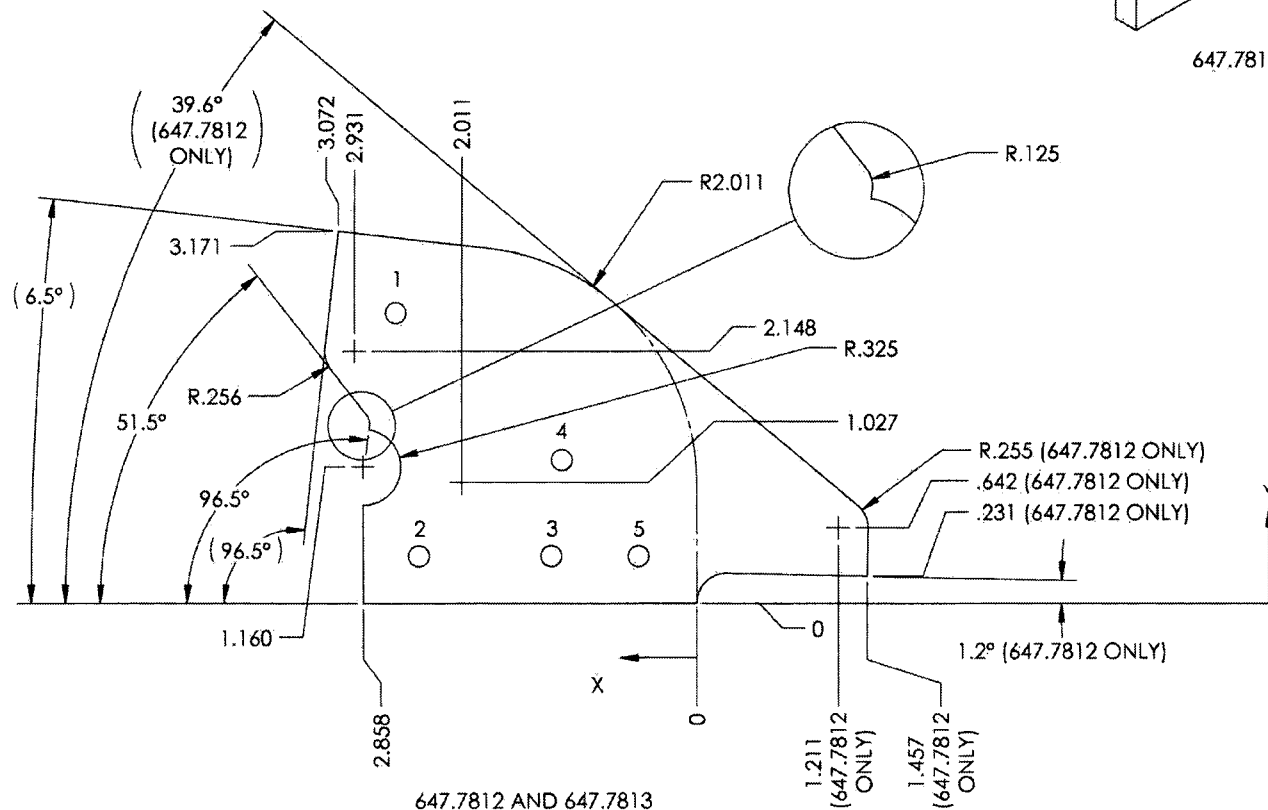
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2	2.380±.002	.400±.002	Ø.177 THRU
3	1.250±.002	.400±.002	Ø.177 THRU
4	1.160±.002	1.220±.002	Ø.177 THRU
5	.500±.002	.400±.002	Ø.177 THRU



647.7812

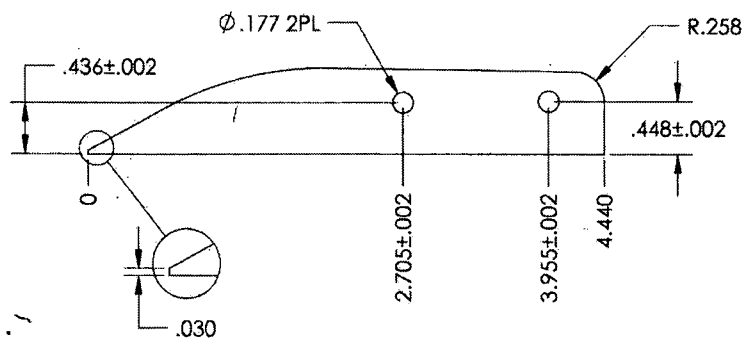
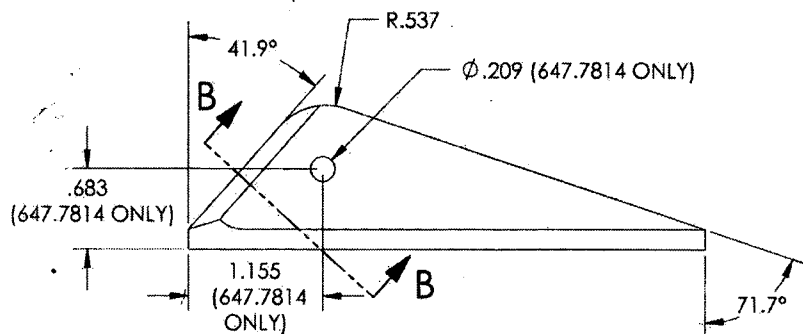
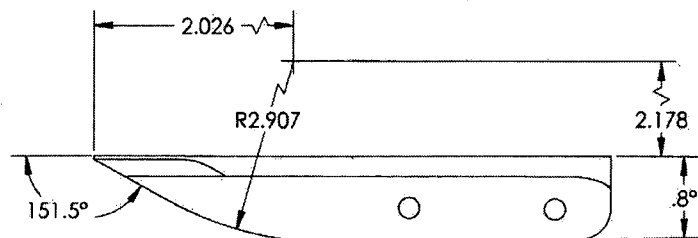


647.7813

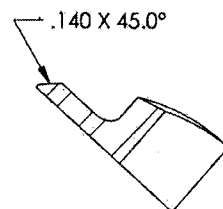
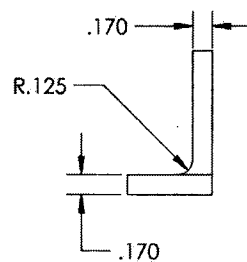


ORIGINAL DATE: 11-05-09		3030 ENTERPRISE CT., SUITE A	
DRAWN BY: E. ANDERSSON		VISTA, CA. 92081	
CHECKED BY: P. BLAVO		(760)-724-5300	
DRAWING APPROVAL: P. BLAVO		APICAL INDUSTRIES INC.	
CONTRACT NO.:		DBA DART AEROSPACE	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.			
TOLERANCES ARE:			
2 PLACES DECIMALS ±.01			
3 PLACES DECIMALS ±.005			
ANGLES ±.5°			
SHEET	CAGE CODE	DWG. NO.	REV.
B	07M2G	647.7800	A
SCALE: NONE			SHEET 3 OF 10

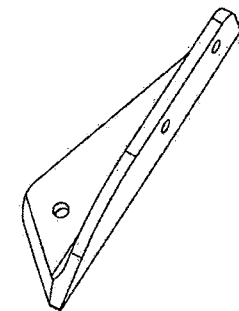
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



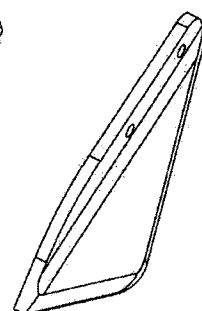
647.7814 SHOWN
647.7815 OPPOSITE



SECTION B-B



647.7814

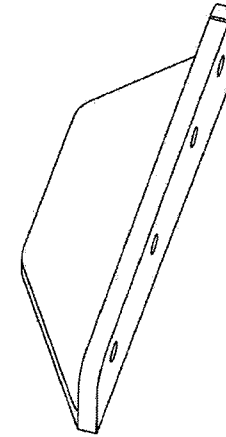
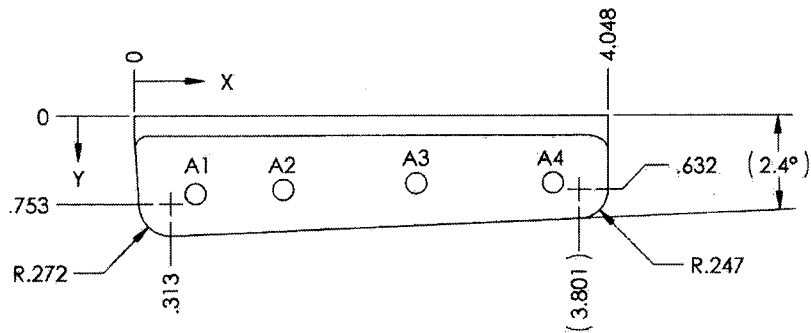


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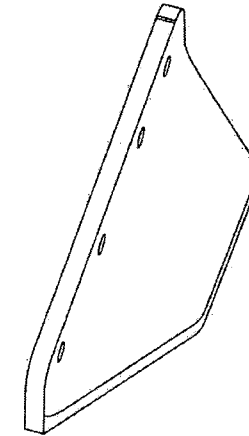
ORIGINAL DATE 11/03/02		DART 3030 ENTERPRISE CT., SUITE A	
DRAWN BY S. ANDERSON		AEROSPACE VISTA, CA. 92081	
CHECKED BY P. BRAVO		APICAL INDUSTRIES, INC. (760) 724-5300	
DRAWING APPROVAL 12-3-02		BRACKET	
CONTRACT NO.		SIZE CAGE CODE DWG. NO.	REV.
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .001 3 PLACE DECIMALS .0005 ANGLES .5°		B 07M26 647.7800	A
		SCALE NONE	SHEET 4 OF 10

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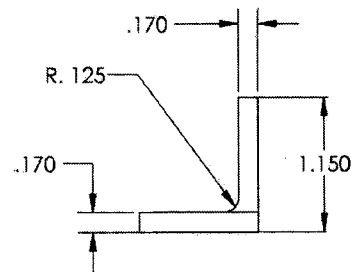
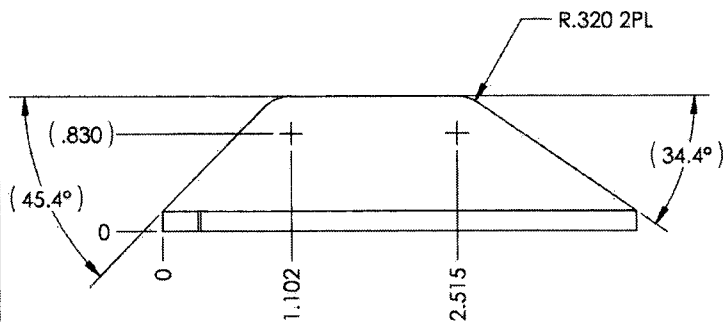
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A3	2.404±.002	.578±.002	Ø.177 THRU
A4	3.576±.002	.573±.002	Ø.177 THRU



647.7816



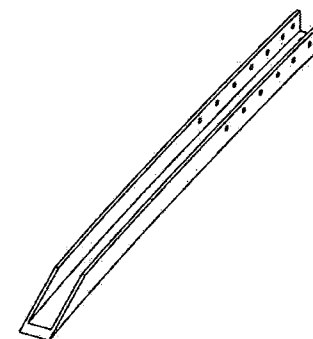
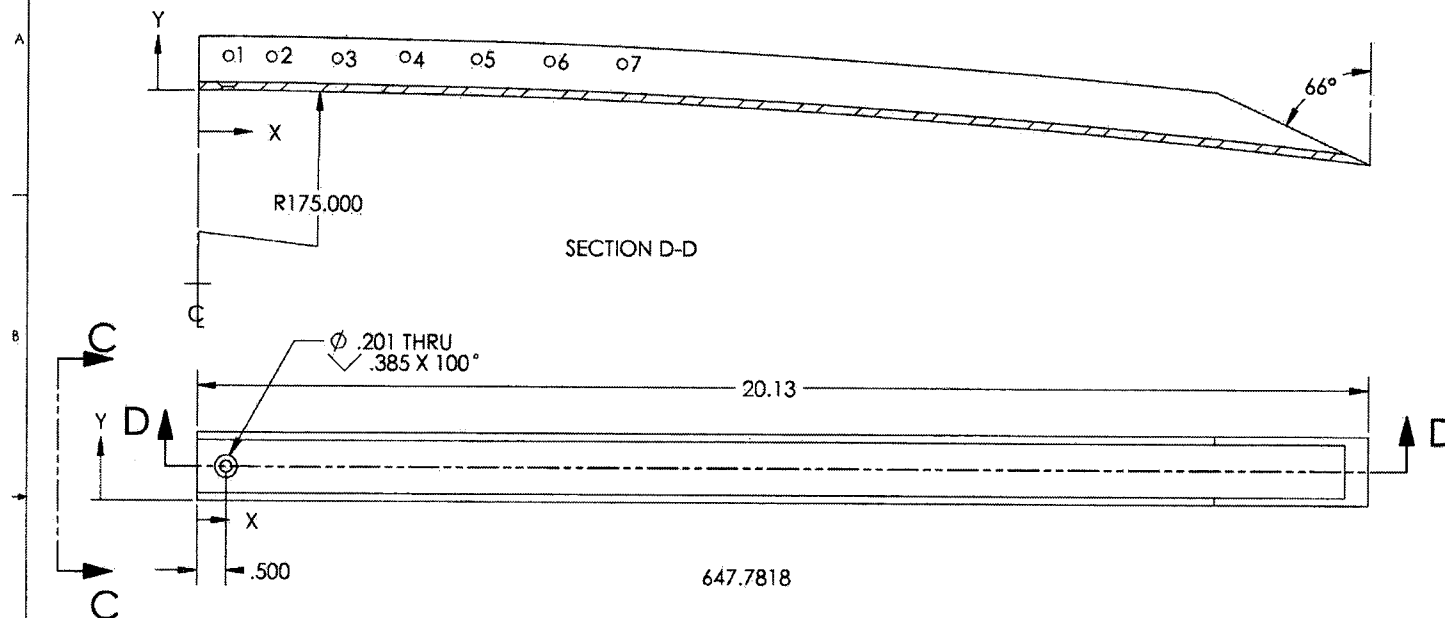
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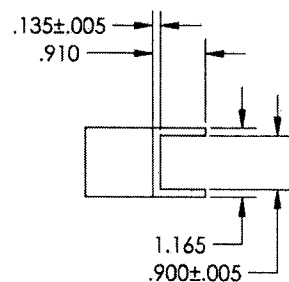
647.7816 SHOWN
647.7817 OPPOSITE

ORIGINAL DATE 11-05-09		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY L. ANDERSON		CHECKED P. BRAVO	
DRAWING APPROVAL P. BRAVO		APICAL INDUSTRIES INC. DBA DART AEROSPACE	
CD-REACT No.		BRACKET	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.2°		REV. B 07/02/16	DWG. NO. 647.7800 A
SCALE NONE		SHEET 5 OF 10	

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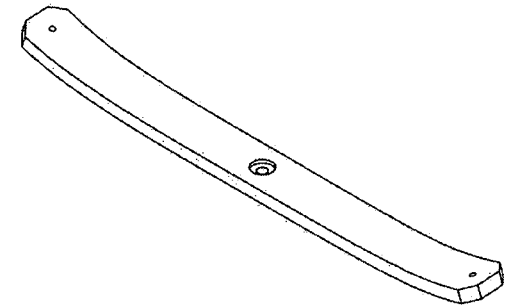
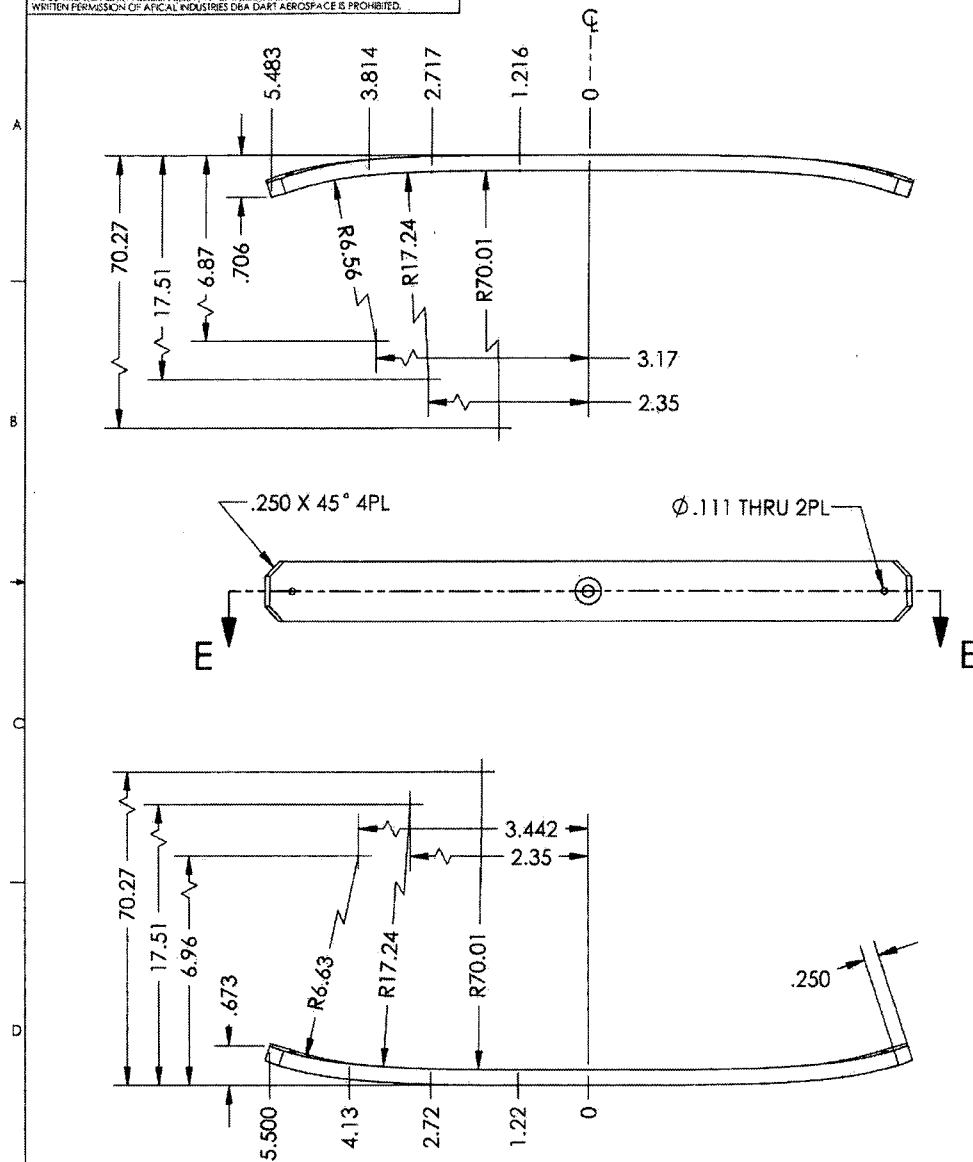
647.7818



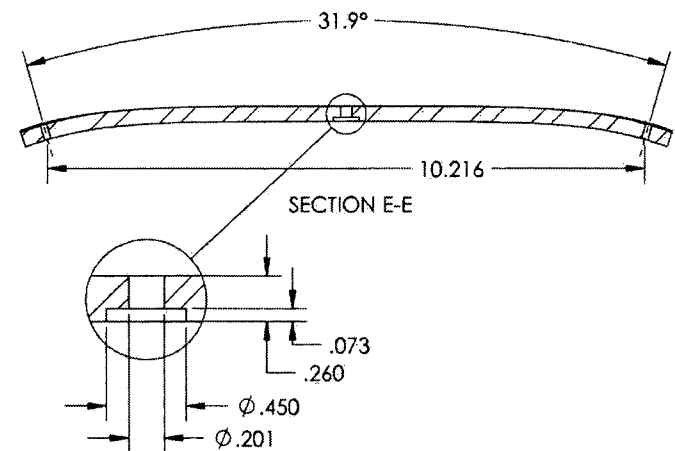
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3	2.386±.002	.549±.002	Ø.177 THRU
4	3.557±.002	.581±.002	Ø.177 THRU
5	4.806±.002	.544±.002	Ø.177 THRU
6	6.055±.002	.507±.002	Ø.177 THRU
7	7.305±.002	.470±.002	Ø.177 THRU

ORIGINAL DATE 11-05-09		3030 ENTERPRISE CT., SUITE A	
DRAWN BY E. ANDERSON	CHECKED BY P. BRAVO	VISTA, CA 92081	
DRAWING APPROVAL P. BRAVO		APICAL INDUSTRIES, INC. (760) 724-5300	
CONTRACT NO.		BRACKET	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACES DECIMALS ±.01 2 PLACES DECIMALS ±.005 ANGLES ±.5°		SIZE B	REV. A
SCALE NONE		DWG. NO. 647.7800	SHEET 6 OF 10

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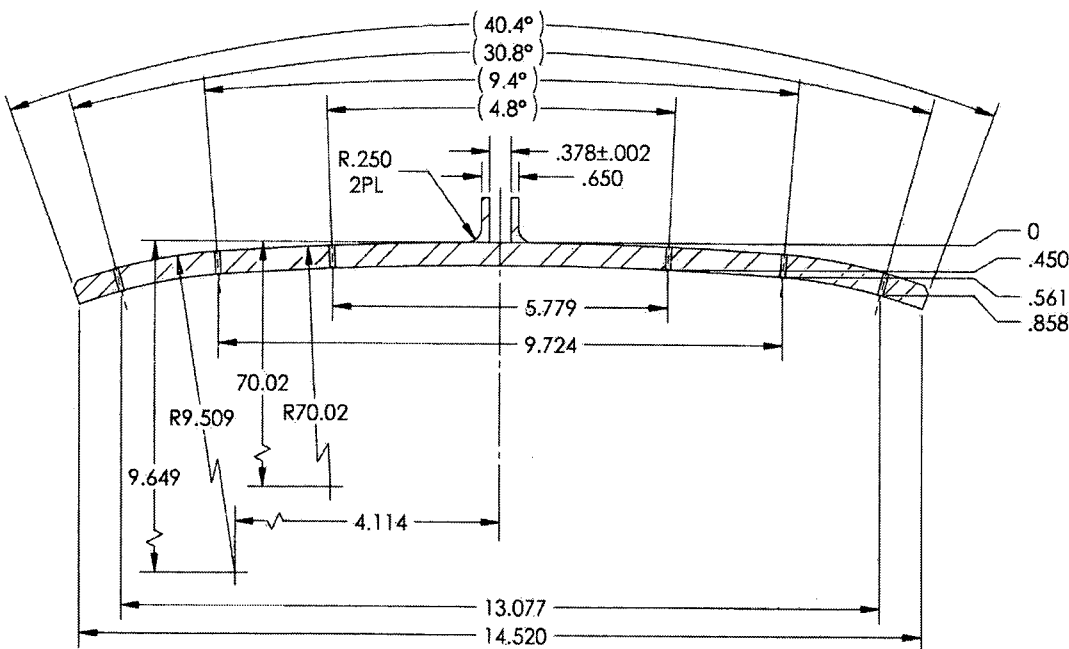
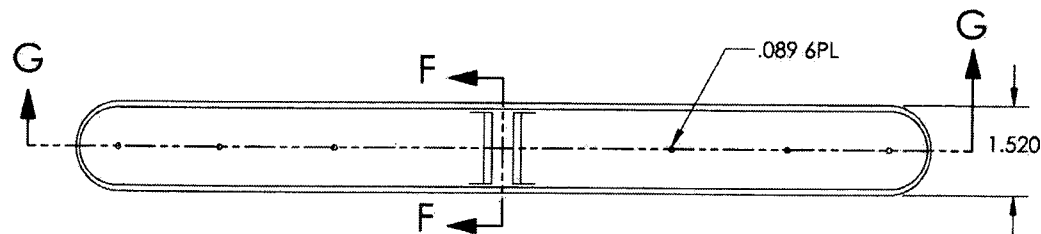
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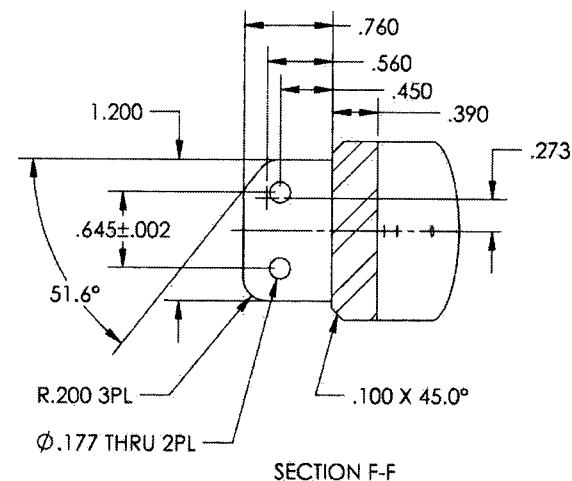
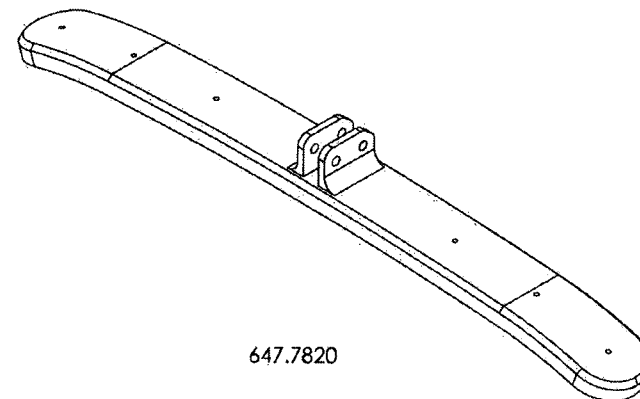
ORIGINAL DATE 11-05-09		DRAWN BY CHECKER		DESIGNED BY BRUNO	
DRAWING APPROVAL		CONTRACT NO.		DART AEROSPACE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.1°		SIZE B	CAGE CODE 07M16	DWG. NO. 647.7800	REV. A
SCALE NONE		SHEET 7 OF 10		BRACKET	

DART 3030 ENTERPRISE CT., SUITE A
VISTA, CA. 92081
(760)-724-5300
APICAL INDUSTRIES INC.
DBA DART AEROSPACE

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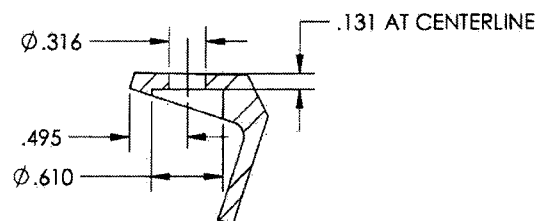
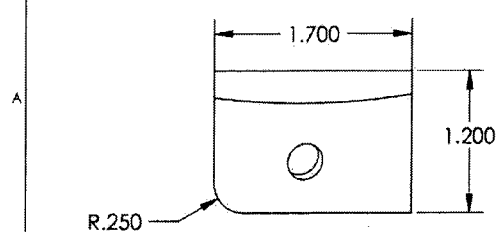
SECTION G-G



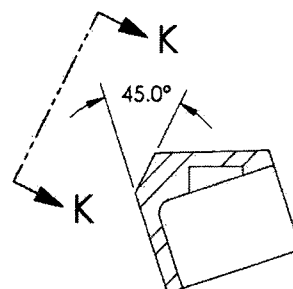
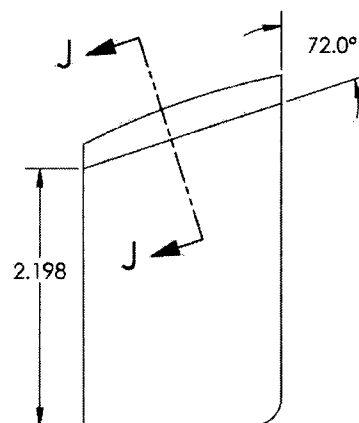
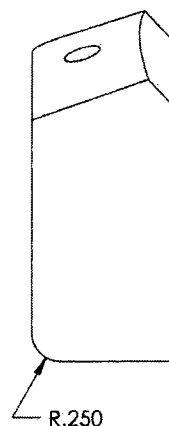
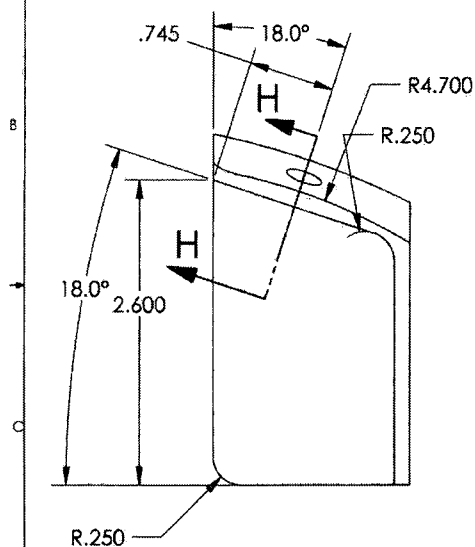
SECTION F-F

DESIGNED BY J. ANDERSON	CHECKED BY J. BRAVO	DATE 11-05-09	3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300
DRAWING APPROVAL J. BRAVO	LEGAL OP. C. M. H. H. H.	CONTRACT NO.	APICAL INDUSTRIES, INC. DBA DART AEROSPACE
BRACKET			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°	SIZE (CAGE CODE) B 07N26	QWTS. (M3) 647.7800	REV. A
SCALE NONE		SHEET 8 OF 10	

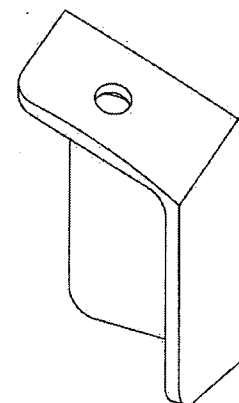
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AFICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF AFICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



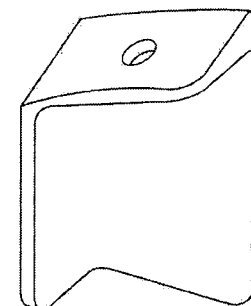
SECTION H-H



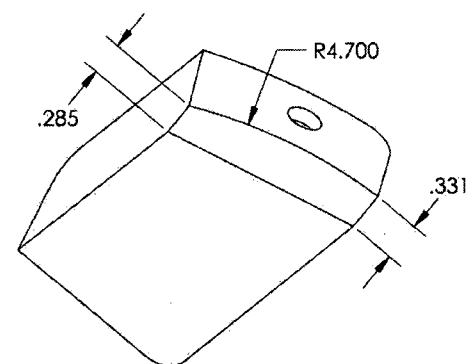
SECTION J-J



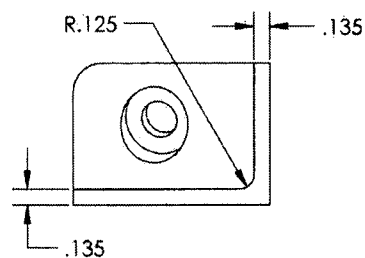
647.7821



647.7822



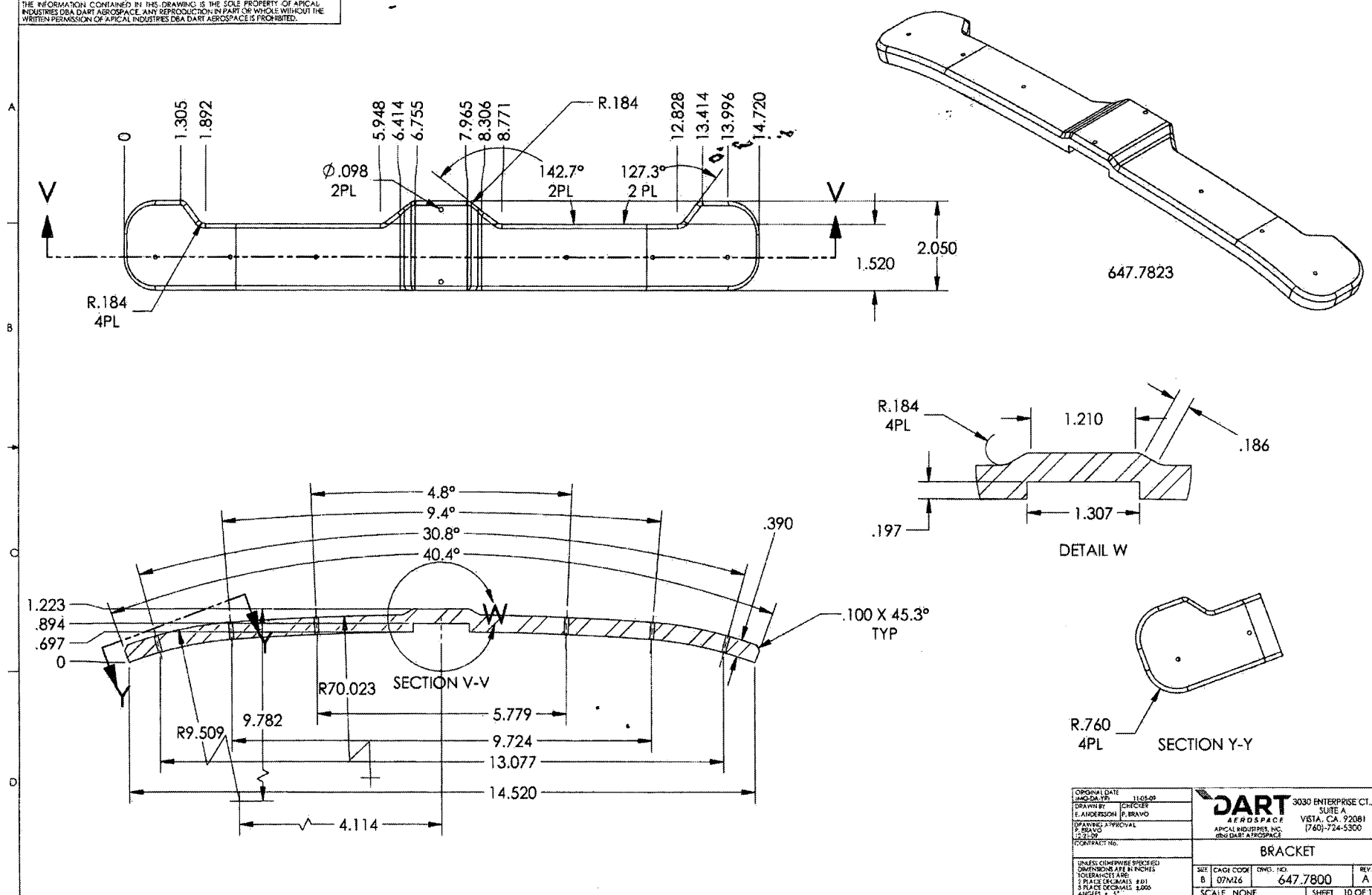
SECTION K-K



647.7821 SHOWN
647.7822 OPPOSITE

ORIGINAL DATE 11-08-09		DRAWN BY CHECKER E. ANDERSON / J. BRAYO		3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWING APPROVAL E. BRAYO 11-08-09		CONTRACT NO.		AEROSPACE APICAL INDUSTRIES INC. 9000 CALIF. AEROSPACE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACES DECIMALS ±.01 3 PLACES DECIMALS ±.005 ANGLES ±.5°					
SEE	CAGE CODE 07M26	DWG. NO. 647.7800	REV. A	BRACKET	
SCALE NONE			SHEET 9 OF 10		

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ORIGINAL DATE 11-05-00	3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760)-724-5300
DRAWN BY E. ANDERSON	DESIGNED BY P. BRADY
DATE 11-05-00	CONTRACT NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.010 2 PLACE DECIMALS ±.005 ANGLES ± .5°	SCALE NONE
SHEET 10 OF 10	REV. A

David Duval

From: Chantal Lavoie
Sent: May-05-17 1:53 PM
To: David Duval
Subject: FW: 17814
Attachments: M7075T6B-RevB.pdf; 646.3000 NC1 Lower Cutter Assy [ECN 02195].pdf; D4842-RevB.pdf

From: Chantal Lavoie
Sent: Tuesday, May 02, 2017 11:57 AM
To: 'Eric Downing' <edowning@dartaero.com>
Subject: FW: 17814

Hi Eric,
Check this e-mail, for 7075-t6 bar or cut from plate.
Thanks
Chantal

From: Chantal Lavoie
Sent: Tuesday, May 10, 2016 1:20 PM
To: Chris Provencal <cprovencal@dartaero.com>
Cc: 'Eric Downing' <edowning@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>; Patrick Smith <psmith@dartaero.com>
Subject: FW: 17814

Hi Chris,
I found another problem when ordering material, see attached for mill spec's 7075-T6.
Material spec's call out 7075-T6/T651 etc..... But with no indication of AMS or QQ-A accepting T651.
Please advise if you can sign deviation would need to order some material.

Note: this material is used for cable cutter part if you look at dwg from Apical (646.3000) they call out 7075-T651 under AMS-QQ-A-250/12, see attached for dwg files.

Dart dwg (D4842) only call out 7075-t6 see attached for dwg files. 95% of 7075-T6 material will be under 7075-T651/AMS-QQ-A-250/12.

Thanks
Chantal

From: Linda Lacelle
Sent: Tuesday, May 10, 2016 1:02 PM
To: Chantal Lavoie <clavoie@dartaero.com>
Subject: FW: 17814

From: Pablo Bravo [<mailto:pbravo@apicalindustries.com>]
Sent: Friday, September 21, 2012 11:08 AM
To: 'Jean-Luc Menard' <jmenard@dartaero.com>; 'Linda Lacelle' <llacelle@dartaero.com>; 'David Shepherd' <dshepherd@dartaero.com>; 'Mike Petsche' <mpetsche@dartaero.com>
Cc: 'Isam El-Kassis' <ielkassis@dartaero.com>; 'Chantal' <clavoie@dartaero.com>; 'Bill Beckett' <bbeckett@dartaero.com>; 'Steve Joseph' <sjoseph@apicalindustries.com>
Subject: RE: 17814

After looking at this more closely, we should be able to use the AMS-QQ-A-250/12 that was originally quoted. No objection on this side to the material change. Let me know what documentation you need to make this happen.

Thanks,

Pablo

From: Jean-Luc Menard [<mailto:jmenard@dartaero.com>]
Sent: Friday, September 14, 2012 5:30 AM
To: 'Linda Lacelle'; 'David Shepherd'; 'Mike Petsche'
Cc: 'Isam El-Kassis'; 'Chantal'; 'Bill Beckett'; 'Pablo Bravo'; 'Steve Joseph'
Subject: RE: 17814

THE 1.250" x 2.00 " would be used on the rail 647.0200.
JL

From: Linda Lacelle [<mailto:llacelle@dartaero.com>]
Sent: Friday, September 14, 2012 7:59 AM
To: 'David Shepherd'; 'Mike Petsche'
Cc: 'Isam El-Kassis'; 'JEANLUC MENARD'; 'Chantal'; 'Bill Beckett'; 'Pablo Bravo'; 'Steve Joseph'
Subject: RE: 17814

JL will get the info on what part it is used in, as the boms are not made yet.
LL

From: David Shepherd [<mailto:dshepherd@dartaero.com>]
Sent: September-14-12 8:12 AM
To: 'Linda Lacelle'; 'Mike Petsche'
Cc: 'Isam El-Kassis'; 'JEANLUC MENARD'; 'Chantal'; 'Bill Beckett'; 'Pablo Bravo'; 'Steve Joseph'
Subject: RE: 17814

Linda,

My understanding is that Pablo Bravo will have to make ALL MRB decisions on the cable cutters since Apical owns the STC.

Therefore, you will need to send an email to Pablo to get a disposition on these types of issues.
What Apical p/n is this for?

PB,

Is the material substitution requested below acceptable?

If not, can you provide guidance on where you were purchasing this material so that Dart purchasing can track it down.

David

From: Linda Lacelle [<mailto:llacelle@dartaero.com>]
Sent: September-13-12 10:23 AM
To: 'Mike Petsche'
Cc: dshepherd@dartaero.com; 'Isam El-Kassis'; 'JEANLUC MENARD'; 'Chantal'
Subject: RE: 17814

Ok,so where do we go from here?

From: Mike Petsche [<mailto:mpetsche@dartaero.com>]
Sent: September-13-12 11:51 AM
To: Linda Lacelle
Cc: <dshepherd@dartaero.com>; Isam El-Kassis; JEANLUC MENARD; Chantal
Subject: Re: 17814

Cable cutters are largely outside of engineering. We are only manufacturing for apical. Using all apical data.

Sent from my iPhone

On 2012-09-13, at 11:40 AM, "Linda Lacelle" <llacelle@dartaero.com> wrote:

Any news on this pls?

From: Linda Lacelle [<mailto:llacelle@dartaero.com>]
Sent: September-11-12 12:57 PM
To: dshepherd@dartaero.com; 'Mike Petsche' (mpetsche@dartaero.com)
Cc: Isam El-Kassis (ielkassis@dartaero.com); JEANLUC MENARD (jmenard@dartaero.com)
Subject: FW: 17814
Importance: High

This is the mat'l for the cable cutters. All 7075 this big is cut from plate. So where do we go from here?

LL

From: Marc Bellavance [<mailto:mbellavance@dartaero.com>]
Sent: September-11-12 12:19 PM
To: 'Chantal Lavoie'
Cc: 'Lacelle, Linda'
Subject: RE: 17814

Chantal,

The mechanical properties of a 1.250" thick plate under AMS-QQ-A-250/11 are below the mechanical properties of a 1.250" thick bar under AMS-QQ-A-225/9 and AMS-QQ-A-200/11 so we can't accept to substitute as proposed below.

Marc Bellavance
Technical/Shop Support
T. 613-632-5200 | C. 613-
676-0992 | F. 613-632-
9311

1270 Aberdeen Street,
Hawkesbury, Ontario,
Canada, K6A 2K7

Product Documentation:
Verify Revision
Status/Download [HERE!](#)

<image001.jpg>

<image002.png> <image003.png> <image004.png> <image005.png>

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Please consider your environmental responsibility before printing this e-mail.

From: Chantal Lavoie [<mailto:clavoie@dartaero.com>]
Sent: Monday, September 10, 2012 2:39 PM
To: Marc Bellavance
Cc: Lacelle, Linda
Subject: FW: 17814

Hi Marc,
Please see attached for p/o:17814, material line 5 and 7 is spec's QQ-A-250-12 acceptable.
Thanks
Chantal

From: Ivers, Stan [<mailto:Stan.Ivers@thyssenkrupp.com>]
Sent: September 10, 2012 1:41 PM
To: 'Chantal Lavoie'
Subject: RE: 17814

Items 5-7 QQ-A- 250-12 is what was quoted please advise will order items 2-4

Thank you

Regards

Stan Ivers
Inside Sales Rep
ThyssenKrupp material NA
905-532-1350
30shi@tkmna.com

From: Chantal Lavoie [<mailto:clavoie@dartaero.com>]
Sent: Monday, September 10, 2012 12:31 PM
To: Ivers, Stan
Subject: RE: 17814

Sorry Stan,
I add send you this order last week please order.
Thanks
Chantal

From: Ivers, Stan [<mailto:Stan.Ivers@thyssenkrupp.com>]
Sent: September 10, 2012 8:07 AM
To: 'Chantal Lavoie'
Subject: 17814

Good morning Chantal

Please advise status on this p.o as nothing is on order and will miss delivery dates

Thanks

Regards

Stan Ivers
Inside Sales Rep
ThyssenKrupp material NA
905-532-1350
30shi@tkmna.com



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36583**

Purchase Order Date 6/6/2017

PO Print Date 6/12/2017

Page Number 4 of 5

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

7	159548	647.7815 BRACKET REV. A	6/16/2017	6.00	\$6.85	\$41.10
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Yes

6/16/2017

AS PER MPP-172 SECTION 2.1,
HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2
AS PER MPP-172 SECTION 4.2,
PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N

Line Total: \$41.10

8	159893	647.7914 BRACKET REV. N/C	6/16/2017	11.00	\$8.70	\$95.70
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Yes

6/16/2017

AS PER MPP-172 SECTION 2.1,
HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2
AS PER MPP-172 SECTION 4.2,
PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N

Line Total: \$95.70

9	71401-45	ADMIN FEE	6/16/2017	1.00	\$200.00	\$200.00
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No

6/16/2017

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

6/12/2017



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913396

Date: 16-Jun-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
10 ea	Part: 646.3814 Wiper Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21185	Rev: N/C	PO: PO36583 Line: 1
2 ea	Part: 647.7810 Bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21189	Rev: A	PO: PO36583 Line: 5
2 ea	Part: 647.7811 Bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21190	Rev: A	PO: PO36583 Line: 6
6 ea	Part: 647.7815 Bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21191	Rev: A	PO: PO36583 Line: 7
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: _____ Made in Canada.			

SP17-6-15



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913396

Date: 16-Jun-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via
		OUR TRUCK
Quantity	Description	
	Certified Signature: <u>15/06/2017</u>	
	Receiver Signature: <u>[Signature]</u>	
	A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited.	
	Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.	
	SP17615	
Made in Canada.		